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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/773,550	02/05/2004	Frank J. Cordiale	DE .002	6795

41898 7590 07/28/2006

LONG & CHYBIK  
1575 DELUCCHI LANE, SUITE 32  
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EXAMINER

SCHEUERMANN, DAVID W

ART UNIT PAPER NUMBER

2834

DATE MAILED: 07/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/773,550

Applicant(s)

CORDIALE ET AL.

Examiner

Judson H. Jones

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☐ Claim(s) \_\_\_\_\_ is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-5, 7-9, 14 and 16-19 is/are allowed.
- 6) ☒ Claim(s) 10, 11 and 13 is/are rejected.
- 7) ☒ Claim(s) 12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

Applicant's arguments with respect to claim 10 have been considered but are moot in view of the new ground(s) of rejection.

#### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 10, 11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Whitehorn 1,885,662 in view of Barry 3,037,462. Whitehorn discloses a solenoid based propulsion system with a tube 6, multiple wire sets 3, a magnetic object 1 and an energy control system that skip energizes select wire sets at selected times as described on page 2 lines 90-93. Whitehorn does not state whether his device operates in a circular tube or if it reciprocates bi-directionally in a closed ended tube. Barry teaches in column 6 lines 33-42 using a bi-directional track instead of a loop. Since Barry and Whitehorn are both from the same field of endeavor, it would have been obvious to one of ordinary skill in the art to have utilized a closed ended tube in the device of Whitehorn, thus making the device of Whitehorn into a reciprocating device for use in situations where a bi-directional transport system between two points was needed.

In regard to claim 11, see Whitehorn page 2 lines 18-37.

In regard to claim 13, see Whitehorn page 1 lines 70-71 and element 3 in figure 1 for the insulated (air and water tight) winding in a compartment.

#### ***Allowable Subject Matter***

Claims 1-9 and 14-19 are allowed.

Claims 12 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance: the prior art of record does not disclose or fairly teach a solenoid based propulsion system having a magnetic object that reciprocally moves within a coil set solenoid wherein the object may be propelled out of the solenoid when a wire coil set is de-energized as recited in claim 1. The prior art of record does not disclose or fairly teach a solenoid based propulsion system with skip energization combined with a sine/square wave audio generator that energizes the coil sets as recited in claim 12. The prior art of record does not disclose or fairly teach reciprocally moving an object in a solenoid and then stopping the reciprocal movement in order to propel the object completely out of an open ended tube as recited in claim 14.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Marshall 6,502,494 B2 discloses a railgun with a multiple coil set solenoid where a magnetic is propelled out of a tube when the wire coils are first energized to accelerate the object toward the muzzle of the railgun and then de-energized to keep from pulling the object back after it has approached and passed the coils. What Marshall does not disclose is the magnetic object moving reciprocally within the coils.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Judson H. Jones whose telephone number is 571-272-2025. The examiner can normally be reached on 8:30 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on 571-272-2044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Judson H. Jones 7/14/2006



KARL TAMAI  
PRIMARY EXAMINER